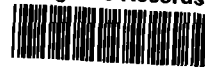


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Date: April 17, 2002**Total Number of Pages, Including Cover: 4****FAX TRANSMITTAL COVER SHEET**
PLEASE DELIVER THE FOLLOWING PAGES**NAME:** Verneta Simon, Fred Micke
David Carlins**COMPANY:** USEPA
Magellan Development Corp.**FAX NUMBER(S):** 312-353-9176
312-642-2773**FROM:** Rich Berggreen

MESSAGE: Attached please find the corrected pages from the February 8, 2002 Lakeshore East Additional Radiation Survey Investigation report we discussed at our meeting earlier this week. The text page had the boring numbers changed from D-21 and D-21D to D-71 and D-71D on Table 1. The Appendix pages for borings E-11 and D-110 had typos that have been corrected at the 2 feet and 4 feet intervals, respectively. Please call with any further questions. I hope you can insert these corrected pages rather than having us re-issue the entire report. Please advise if we need to send corrected pages to others.

IF YOU DO NOT RECEIVE ALL PAGES, PLEASE CALL (847) 279-2500 IMMEDIATELY
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Magellan Development Group, Ltd.
STS Project No. 1-32193-ZH
February 4, 2002



6.0 VOLUME CALCULATIONS

Table 1 below, presents a summary of the detections, the thicknesses and depths determined from this investigation. These values are used in the following section to calculate the apparent volume of impacted soil identified at each of the newly discovered locations.

Table 1
Detections of Impacted Soil

Boring No.	Depth Interval (ft bgs)	Gamma Counts (Maximum, 30 seconds)
D-10	4 - 6	115,880 ²
D-34	5 - 6.5	108,780 ¹
D-71	3.5 - 11	610,257 ²
D-71D	7 - 9	87,027 ²
D-77	5 - 6.5	37,886 ²
D-94	2 - 4	69,116 ¹
D-94A	2.5 - 4	75,027 ²
D-94D	0.5 - 3	197,267 ¹
E-56	4.5 - 6.5	129,630 ¹
E-56A	4.5 - 8.5	273,156 ¹

¹ Cut-off for 7.2 pCi/g = 15,894 counts/30 seconds

² Cut-off of 7.2 pCi/g = 18,059 counts/30 seconds

6.1 Assumptions

Certain assumptions were used in calculating the volumes of radiologically impacted soil. In that gamma radiation can penetrate soil for some limited distance, a layer of radioactive material may cause elevated readings some distance above and below the actual radioactive material. This is referred to as "shine". For the purpose of these calculations, "shine" was ignored, which would tend to result in an over-estimation of the impacted volume. Additionally, recognizing that excavation will tend to somewhat homogenize the soil, and a larger volume will likely be excavated than the actual limit of radioactivity, the excavated thickness was increased by 6 inches above and 6 inches below the intervals where readings exceeded the cleanup threshold. Finally with regard to thickness, the thickest impacted section in a cluster of borings and step-outs was used, which will also tend to overestimate the actual excavated volume.

A rectangular area was assumed for the material to be removed. The precise shape of the impacted zones is unknown, and the rectangular area is conservative and simplified the calculations.

Lakeshore East Site
Down Hole Field Log
Project No. 32193ZH

Date: January 15, 2002

Technician: Toby Shewan

Instrument Model No.: Ludlum 2221

Operational Check: 20,323

Serial No.: 132844

Probe Model No.: PR 44-10

Serial No.: 168144

Cutoff Value = 7.2 pCi/gm =

* Shielded (2")

18,059 counts per 30 sec.

Boring No.: D-110
Maximum Depth 13 feet

Depth - FEET	Counts per 30 Seconds	Depth - FEET	Counts per 30 Seconds
0.5	4393	15.5	
1	4613	16	
1.5	4543	16.5	
2	4878	17	
2.5	5051	17.5	
3	5720	18	
3.5	8539	18.5	
4	10,165	19	
4.5	10,820	19.5	
5	9940	20	
5.5	8830	20.5	
6	6910	21	
6.5	7340	21.5	
7	6920	22	
7.5	6032	22.5	
8	5528	23	
8.5	6539	23.5	
9	7071	24	
9.5	6732	24.5	
10	5029	25	
10.5	3513	25.5	
11	2620	26	
11.5	2829	26.5	
12	4113	27	
12.5	4356	27.5	
13	4764	28	
13.5		28.5	
14		29	
14.5		29.5	
15		30	

Lakeshore East Site

Down Hole Field Log

Project No. 32193ZH

Date: January 4, 2002

Technician: Toby Shewan

Instrument Model No.: Ludlum 2221

Operational Check: 20,122

Serial No.: 132844

Probe Model No.: PR 44-10

Serial No.: 168144

Cutoff Value = 7.2 pCi/gm =

* Shielded (2")

18,059 counts per 30 sec.

Boring No.: E-11

Maximum Depth 11 feet 10 inches

Depth - FEET	Counts per 30 Seconds	Depth - FEET	Counts per 30 Seconds
0.5	3773	15.5	
1	4126	16	
1.5	4261	16.5	
2	5040	17	
2.5	3290	17.5	
3	2514	18	
3.5	3593	18.5	
4	4874	19	
4.5	4272	19.5	
5	5749	20	
5.5	8887	20.5	
6	9628	21	
6.5	9542	21.5	
7	8621	22	
7.5	7115	22.5	
8	6517	23	
8.5	5773	23.5	
9	5458	24	
9.5	5354	24.5	
10	6236	25	
10.5	5585	25.5	
11	5031	26	
11.5	5135	26.5	
11.10	5176	27	
12.5		27.5	
13		28	
13.5		28.5	
14		29	
14.5		29.5	
15		30	